SLS 985: 1992

Sri Lanka Standard For Grading of Timber Part 2: Terminology

SRI LANKA STANDARDS INSTITUTION

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- Sri Lanka Standard

GRADING OF TIMBER

PART 2 Terminology

FOREWORD

This standard was approved by the Sectoral Committee on Timber and Timber based products and was authorized for adoption as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on...1992-10-07

This standard is in several parts as follows :

Part 1 Species of timber;
Part 2 Terminology; and
Part 3 Grading of logs.

It is intended to prepare further parts in this standard covering other categories such as sawn timber.

This part of the standard deals with terminology applicable for grading of timber. Part 1 of this standard provides a comprehensive list of Sri Lankan species of timber utilized for industrial, commercial and other purposes. Part 3 of this standard specifies rules relating to grading of logs.

The following standards have been used as guidance documents in the preperation of this standard

a) Asia Pacific Regional Grading Rules for Hardwood logs other than Teak, Food and Agricultural Organization (FAO): 1957;

b) South East Asia Lumber Producers Association : Log Grading Rules : 1981;

c) Food and Agricultural Organization. Working Paper No. : 8 Sept : 1982 (FO : RAS/78/010);

d) The Sri Lanka Forester (The Ceylon Forester) : Vol. XI Nos. 3 & 4 (New Series) Jan - Dec 1974 (special issue);

e) A Handbook to The Flora of Ceylon by Henry Trimen, M/S Bishen Singh, Mahendra Pal Singh and M.S.Periodical Experts; and

f) The Revised Handbook to The Flora of Ceylon, Edited by M.D.Dassanayaka and F.R. Fosberg.

1 SCOPE provides meanings for terms used

This standard in grading of timber

2 TERMINOLOGY

For the purpose of this standard the following definitions shall apply:

2.1 bark: Outermost layer of a tree outside the sapwood.

2.2 bend: A deviation from straightness of the log (see Fig. 1 and Table 1 of SLS 98 Part 3 : 1992).

2.3 bend fraction: Extent of the bend expressed as a proportion of the smallest diameter of the top end of the log.

2.4 borer holes: Holes in roundwood caused by insects or their larvae or by marine shells or barnacles. Borer holes are categorized into three types.

a) pin holes or needle holes: Small borer holes not more than 1.5 mm in diameter.

b) shot holes: Medium borer holes over 1.5 mm up to 3 mm in diameter.

c) worm holes or grub holes: Larger borer holes over 3 mm in diameter (see Fig. 1).

2.5 bottom: The bottom end of a log.

2.6 brittle: A defective heartwood of a log characterised by abnormal brittleness which occurs in certain kinds of tropical hardwood. The limits of the defects are not sharply defined and the affected wood shows no visible sign of decay.

2.7 brittle heart: A brittle core of a log including the pith, also known as spongy heart, soft heart or brash heart (see 2.6).

2.8 butt: Lower portion of a tree.

2.9 buttress: An out growth of the butt connecting it with the roots.

2.10 centre hole: A hole located within a circle centered on the pith (see Fig. 1).

2.11 check: small separations of the wood fibers in a longitudinal direction.

2.12 crook: A sudden deviation from staightness at any point in the length of the log (see Fig. 2).

2.13 cup shake: A separation of the fibres along the annual growth ring of the wood which does not encircle the heart (see Fig. 1).

2.14 cylindrical: A log having the shortest top end diameter not less than 80 per cent of the longest top end diameter.

2.15 defect: Any abnormality or irregularity that lowers the utility value of wood by decreasing its stength or affecting adversely its working or finishing qualities,or its appearance.

2.16 defect system: A grading system taking into account the influence of visible defects as an indicater to determine the quality of timber.

2.17 degrade: Applies to a log that has developed more defects through any cause, than were permitted in the earlier grade of the log.

2.18 diameter of the log: The mean of the diameter and the diameter at right angles to it , measured under-bark at both ends Where the defects have been expressed as a percentage of the diameter of a log, the diameter of the end face on which the defects occur and shall be taken as the mean of the longest diameter and that at right angles to it, under-bark, at the end face concerned.

2.19 discolouration: A stain or variation from the natural colour of the wood usually caused by sap stain fungi or by oxidation.

2.20 drag hole: Hole cut at the end of the log for the purpose of dragging.

2.21 fresh cut: A log having sound sapwood free from teredo (marine borer), large and deep grub or worm holes,marine shells(barnacles) and fruiting bodies of fungi.

2.22 gross volume: Sum of the sound volume (see 2.49) and the volume of defects in the log.

2.23 heart: Central portion of a log including the pith and the adjacent wood which may be defective.

NOTE
Heart should not be confused with heartwood.

2.24 heart checks: Fine separations of the wood fibres near the heart in a longitudinal and radial direction (see Fig. 1 and Fig. 3).

2.25 heart defect: Heart rot, discoloured heart, brittle heart and/or hollow resulting from heart rot.

2.26 heart rot: Decayed heart.

2.27 heart shake: Large separations of the wood fibres near the heart in a longitudinal and radial directions (See Fig. 4).

2.28 heartwood: The wood extending from the pith to the sapwood, the cells of which no longer participate in the life process of the tree. (Heartwood may be infiltrated with gums, resins and other material that may make it darker and more durable than sapwood) (see Fig. 5).

2.29 inbark; ingrown bark: Patches of bark, partially or wholly enclosed within the wood.

2.30 knot: A portion of a branch which has become embedded in the wood by the natural growth of the tree. The cross section of a knot is normally circular or oval in shape and is measured by taking the mean of the longest and shortest diameter (see Fig. 1).

2.31 landing: Collection point from where logs are despatched.

2.32 log: Part of a stem or branch of a tree with properly bucked ends, defined within certain sizes with a minimum mid-girth of 450 mm under-bark.

2.33 medullary ray: Ribbon shaped strand of soft tissue extending in a radial direction across the grain.

2.34 nearly cylindrical: A log having a shortest top end diameter not less than 70 per cent of the longest top end diameter.

2.35 over-bark: Over the bark of a log .

2.36 pin holes: Holes in logs caused by Ambrosia beetles, either in the living tree or after felling (see also 2.4).

2.37 pith: The soft core (usually small) occuring in the structural centre of a log (see Fig. 5).

2.38 pole: Roundwood timber having a girth of 100 mm to 450 mm over-bark at 600 mm from the butt end.

2.39 properly bucked ends; well trimmed ends: The ends of the log which are cut flat at an angle not less than 80 degrees to the axis of the log.

2.40 radial check: A fine separation of the fibres along the medullary rays at the end face of the log not extending beyond the sapwood.

2.41 radial shake: A larger separation of the fibres along the medullary rays at the end face of the log.

2.42 ring shake; round shake: A separation of the fibres along the annual growth rings of the wood which almost completely encircles the pith/heart (see Fig. 1)

2.43 round wood; round timber: Timber in the original round form.

2.44 sapwood: Outer most layers of wood in a log which in the growing tree contain dead and living cells, which are engaged in sap conduction and food storage (see Fig. 5).

2.45 scaling: Measuring of timber for various parameters such as length, girth, diameter, defects etc.

2.46 shot holes: Holes in logs caused by boring insects or their larvae, such as Lyctus beetles either in the living tree or after felling. [see 2.4(b)]

2.47 snout: The end of the log, usually the butt end, tapered to facilitate dragging or sliding.

2.48 sound defect: Defect which is free from decay/rot.

2.49 sound knot: A tight knot free from decay, solid across its face and at least as hard as the surrounding wood.

2.50 sound volume: The volume of a log including sound defects (see ∂ 3.4 of SLS.98?. Part 3 : 1992)

2.51 split: A wide separation of the wood fibres along the grain developing on the surface (see Fig. 1 and Fig. 6).

2.52 straight grain: The principal wood cells or fibres running nearly parallel to the axis of the log.

2.53 top: The upper portion of a log which usually has a smaller cross-section/end.

2.54 twisted grain: A spiral distortion of the fibres of a log

2.55 under-bark: Under the bark of a log.

2.56 wane: The original rounded surface of a tree remaining on a squared log.

2.57 yield system: A grading system taking into account the sound volume of a log as an indicator to determine the quality.

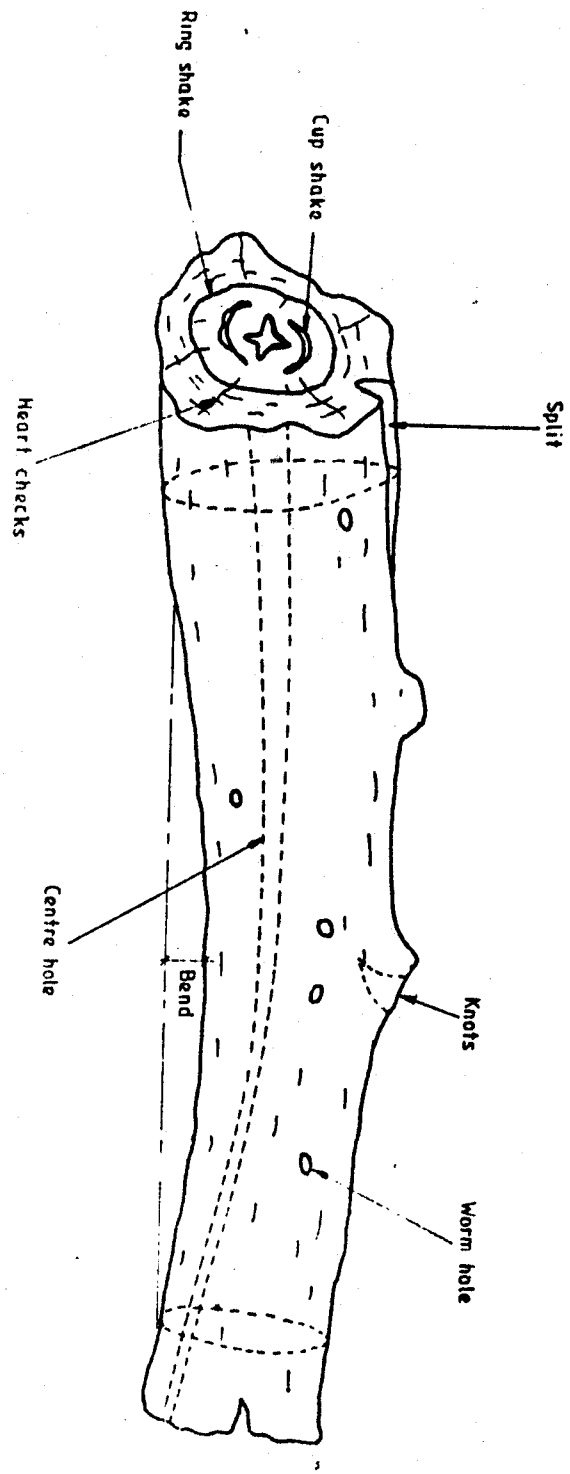

FIGURE 1 - Various defects in a log

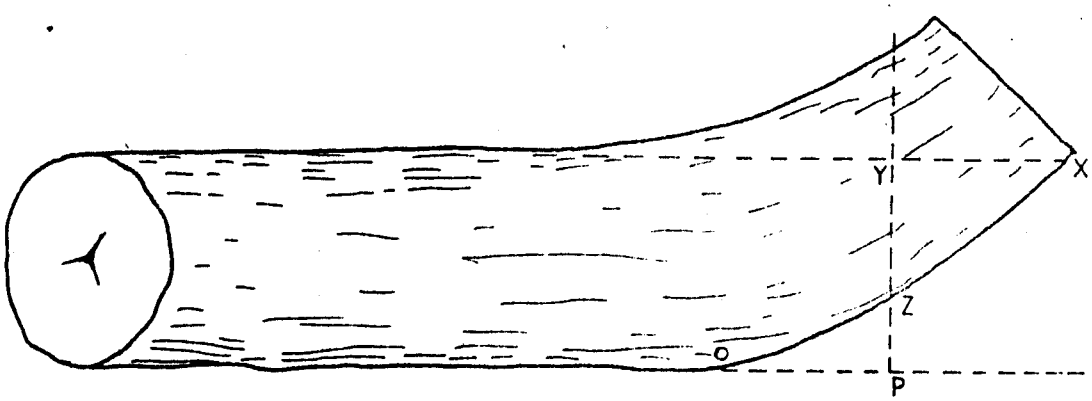

FIGURE 2 – Crook (Cr.)

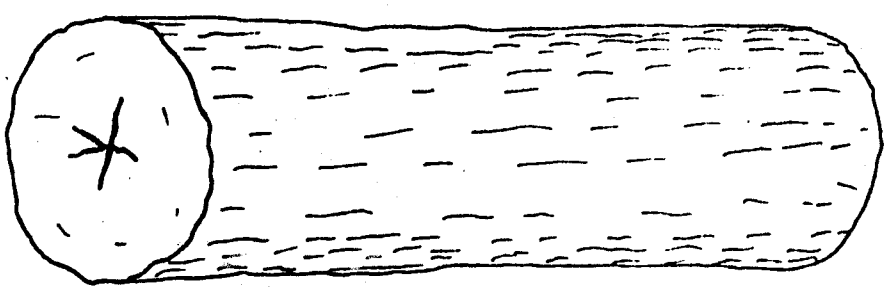

FIGURE 3 – Heart check (H. Ch.)

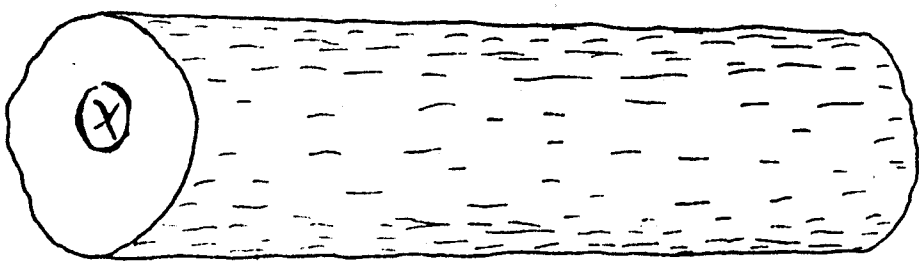

FIGURE 4 – Heart shake (H.S.)

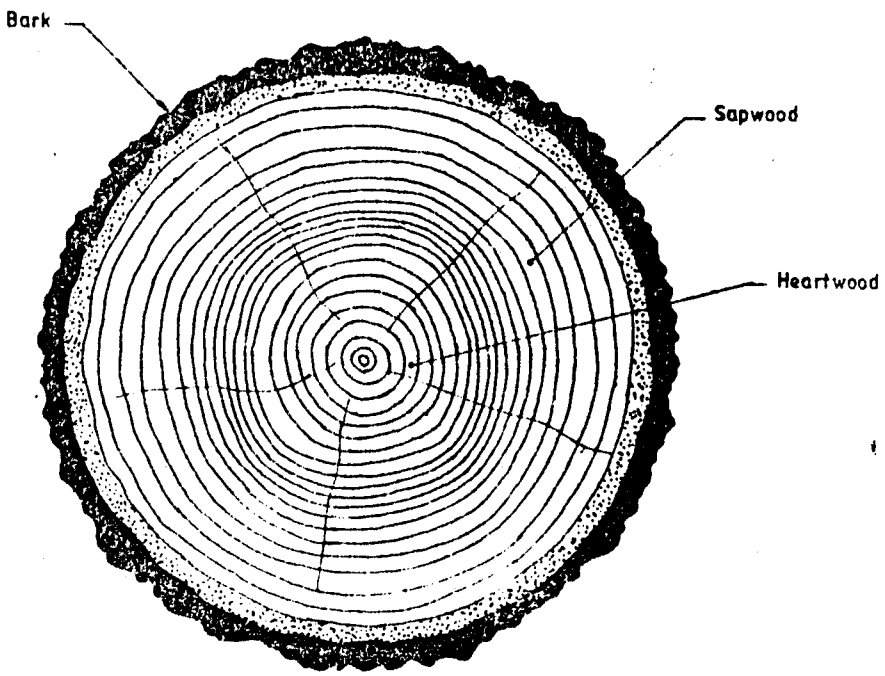

FIGURE 5 - The cross-section of a tree trunk

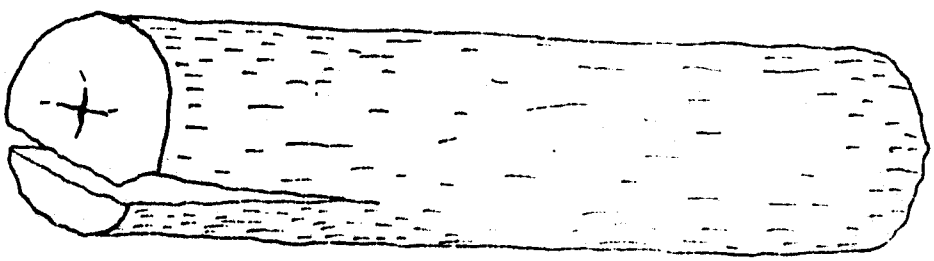

FIGURE 6 - Split (Sp.)